

The provenance of the Gilbert Rail *Tricholimnas conditicius* (Peters & Griscom)

by Michael Walters

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Many of the distinctive rail species found in the Pacific and Indian Ocean regions appear to have been derived from an adaptive radiation of a group of rails with long but stout bills. In isolation on islands these rails produced divergent forms. Two moderate-sized island rails which appear to be derived from this group were placed in the genus *Tricholimnas*; Lafresnaye's Rail *T. lafresnayanus* from New Caledonia, and the Woodhen *T. sylvestris* from Lord Howe Island. Later Peters & Griscom (1928) also assigned to this genus the Gilbert Rail *T. conditicius*, known only from a single specimen believed to have come from Apiang Atoll in the Gilbert Islands.

Greenway (1952) queried the locality of origin of the last-named species and suggested that the specimen was in fact an immature female of the Lord Howe Island Woodhen. In the present paper some of the information concerning *T. conditicius* is re-examined with a view to determining its status.

Morphology and taxonomy

The holotype of *conditicius*, whose sex was not determined, was described as much smaller than *T. sylvestris*, but its measurements are only slightly smaller than those of female *sylvestris*. In the original description, Peters & Griscom stated that the skeleton showed evidence of immaturity; the adult would therefore be larger, probably comparable in size to a female *sylvestris*, and possibly more similar than was supposed. Since the colouration is similar to that of *T. sylvestris*, Greenway (1952) suggested that any difference might be due to its having been preserved in alcohol for about 60 years; but while alcohol dissolves out red and yellow pigments (and in so doing may modify others) it does not usually affect the brown and grey melanins involved in this instance. (I am indebted for this information to C. J. O. Harrison, based on specimens in alcohol in the BMNH.)

The locality of *T. conditicius*

T. conditicius was described from a single specimen preserved in alcohol, and no other specimens are known. It was labelled "Kingsmill Islands 1861, Andrew Garrett, collector". Greenway (1952), in suggesting that the locality was an error and that the specimen was an immature individual of *T. sylvestris*, believed that Garrett either had visited Lord Howe Island, or had had the specimen sent to him from there. However, Garrett's biography (Thomas 1979) indicates that it is unlikely that he ever visited Lord Howe and had certainly not been there prior to 1861. Although he subsequently dealt widely in natural history specimens, these were almost entirely marine organisms, so that any birds would most likely be incidental specimens picked up on his travels (S. L. Olson).

He began collecting in 1852 when he arrived in Hawaii and began to deal mainly in shells and fish. In 1856 he visited the Marquesas and Society

Islands, but most of his collections were later lost. In 1859-60 came his visit to the Kingsmill Islands. Holyoak & Thibault (1978) in considering other bird taxa based on Garrett specimens, state that Graffe in 1873 . . . "considers Garrett's locality labels to be reliable, and we have come to the same conclusion after seeing many specimens collected by him". If, therefore, the locality was correctly given as Kingsmill Islands, the specimen is not likely to have been *T. sylvestris*.

It would seem impossible for a virtually flightless rail to have crossed well over 2000 miles of the Pacific Ocean, from Lord Howe Island to the Gilberts. The only other possibility would be an error in mislabelling by the Museum of Comparative Zoology.

Assuming the label to be correct, it indicates that the specimen was collected in the Gilbert Islands. Kingsmill Islands now refers to only a part of that archipelago, but in the last century was used for the whole group. Peters & Griscom (1928) discovered (Warren [1860]) that Garrett had arrived at Apiang Atoll on 9 September 1859, staying on that island for a time and returning to Honolulu on 11 January 1860. They assumed that the rail was collected between these dates and that the year 1861 on the label referred to the date of its arrival at the Museum. On the basis of this information they listed locality and date as "Apiang, Gilbert Islands, 1859". The island has more recently been spelled Abaiang (Amerson 1969).

There is, in fact, no evidence that the rail was collected on Apiang as opposed to some other island in the group, and there is evidence suggesting the latter to be more likely. The small book [1860] by Mrs Jane S. Warren (misquoted as Mrs James S. Warren by Peters & Griscom and by Greenway) gives a contemporary account of Apiang which was the centre of the Micronesian Mission. Stores for the mission (including meat) took 2 years to reach Apiang and when they arrived they were often spoiled. The possibility of a rail which would be edible if not palatable, surviving on such a meat-starved island even as late as Garrett's visit seems highly unlikely.

In addition, Greenway discovered an undated MS note written by Garrett on the "Birds of Apiang" which reads:- "During my short residence at the above location, I collected one or two specimens of every bird I could get. As I had not time to prepare their skins I packed them in alcohol. There is one species of land bird, and this I never saw but obtained one of its tail feathers which I send you. I think it is a species of Hawk." This feather cannot now be found, and Greenway considered it unlikely that Garrett would consider the rail to be a seabird or a hawk.

Garrett went out on the third voyage of the Morning Star, which dropped him at Apiang while it visited other mission stations such as Ponape. It then returned to Apiang, collected Garrett and called only at Ebon Atoll on its return journey to Honolulu (Warren [1860]). Ebon is in the southern Marshalls, close to the northern Gilberts and might have been construed as being part of that group. It is one of the lushest, best vegetated and most fertile of the Marshall Islands (Amerson 1969) and could have provided a suitable habitat for the rail. The case for Ebon as the type locality is strengthened by the fact that Peters & Griscom (1928) also

describe a dove *Ptilinopus marshallianus* from that island, known only from the holotype.

One piece of the data remains which has apparently been overlooked. In the original paper by Peters & Griscom, G. M. Allen added in his appendix on the dissection of the specimen: "The large, thick-walled stomach contained seeds of two species, the chitinous shell of a small beetle, and an entire harvest fly." It is surprising that no-one seems to have realised the significance of this comment. If the insects could be identified it is possible that the island of origin could be established. However, the present curator of the Museum of Comparative Zoology, R. A. Paynter, Jr, advises me that these specimens cannot at present be found.

On the present evidence it would appear that the type locality for *Tricholimnas conditicius* is Kingsmill Islands, interpreted as covering the Gilbert Islands in the broad sense, but with the likelihood that Ebon in the Marshalls was also included in this term.

Habitat

In discussing *T. conditicius*, Greenway (1952) laid emphasis on the fact that *T. lafresnayanus* and *T. sylvestris* were members of what he considered an habitually mountain-inhabiting genus preferring forested hills and that it would be improbable for a species of the genus to occur on a low atoll. He appears to have overlooked a fact which he later quoted (1958), that *T. lafresnayanus* formerly inhabited forested river valleys near the coast (Layard & Layard 1882) and had been limited subsequently to mountain forest by predation from introduced dogs, cats and rats. *T. sylvestris* of Lord Howe Island occurs as a tiny relict population in damp forest on a mountain summit. However, during recent conservation studies of the species, Fullagar (1985) comments that when a pair was given the opportunity to breed on low ground they did so rapidly and with far greater success than the mountain birds. Thus *T. sylvestris* appears to be another species that prefers vegetated lowland, but has been forced into an unsatisfactory marginal habitat by predation in the past. In the circumstances the existence of another species related to one of these, on a low island, would not be exceptional, especially if the low island were a well vegetated one such as Ebon.

It is possible that another member of this group formerly occurred in New Zealand. In 1893, Hamilton described bones from Castle Rocks which he called *Ocydromus minor*. Bones of this form have subsequently been discovered at several sites in New Zealand (Scarlett 1955, Oliver 1955). All are from Pleistocene deposits and were described as most similar to *T. sylvestris* but generally larger, though the tibia is smaller.

Conclusions

The available evidence suggests that Peters & Griscom correctly described the type of *Tricholimnas conditicius* as a species. It seems probable that this species and *T. sylvestris*, *T. lafresnayanus*, and possibly *T. minor*, all represent relict populations of a group of rails formerly occurring widely on low islands in the western Pacific Ocean.

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New records of birds from western Peru

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Although much of western Peru is relatively accessible, at least by comparison with the forested eastern part of the country, many aspects of bird distribution on the western slope of the Andes remain surprisingly little known. This paper gives details of several recent records from this region.

WOOD STORK *Mycteria americana*

I saw an immature in the marshes at Villa, on the outskirts of Lima, Dpto. Lima, 22 Jan. 1985. Another was present at Mejia, Dpto. Arequipa, 17 Jan–28 Feb 1985 (R. A. Hughes). A third, based on a description by a boatman who had demonstrated familiarity with all the expected local birds (*fide* T. A. Parker), was present on Paracas Bay, Dpto. Ica, mid-Jan 1986. These appear to be the first records of Wood Stork on the coast of Peru south of Dptos. Tumbes and Piura, in the extreme northwest of the country (Hellmayr & Conover 1948, Blake 1977), although the species has been recorded in the western Andes of central Peru (Koeppke 1970).

SPECKLED TEAL *Anas flavirostris*

T. A. Parker and I found a single teal in marshes at the mouth of the Rio Pisco, Dpto. Ica, 12 Jul 1986. It was readily identifiable by its relatively small size, prominent yellow bill, and the dark brown head contrasting with the paler body plumage. This is only the second record of this Andean species on the coast of northern or central Peru (Pearson & Plenge 1974),